

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Hidemi KURIHARA et al.

Application No.: 10/571,069

Confirmation No.: 2459

Filed: December 7, 2006

Art Unit: 1649

For: THERAPEUTIC AGENT AND THERAPEUTIC  
METHOD FOR PERIODONTAL DISEASES  
AND PULPAL DISEASES

Examiner: C. M. Borgeest

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

September 21, 2011

Sir:

Applicant(s) hereby submit(s) an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications, or other information submitted for consideration by the Office are listed on the PTO-SB08.

II. COPIES

☒ a. Copies of foreign patent documents, non-patent literature and other information.

☐ b. REFERENCES PREVIOUSLY CITED OR SUBMITTED: Copies of any information not provided can be found in one or more of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Application No. and U.S. Filing Date

III. CONCISE EXPLANATION OF THE RELEVANCE

☒ a. NON-ENGLISH LANGUAGE DOCUMENTS: A concise explanation of the relevance of all non-English language patents, publications, or other information listed is as follows: An English language abstract is attached for Non-Patent Literature document Yaegashi et al. 1989.

☐ b. ENGLISH LANGUAGE SEARCH REPORT OR FOREIGN PATENT OFFICE COMMUNICATION: An English language version of the search report or Foreign Patent Office communication that indicates the degree of relevance is attached.

☐ c. OTHER: The following additional information is provided.

IV. STATEMENT UNDER 37 C.F.R. § 1.97(e)

The undersigned hereby states that:

☐ a. Each item of information contained in the IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than 30 days prior to the filing of this IDS. This statement does not relate to English language counterparts not listed in a communication from the foreign patent office. Such English language counterparts are provided to aid the Examiner's consideration of non-English items first cited in the communication from the foreign patent office; or

☐ b. Each item of information contained in the IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. This statement does not relate to English language counterparts not listed in a communication from the foreign patent office. Such English language counterparts are provided to aid the Examiner's consideration of non-English items first cited in the communication from the foreign patent office; or

☐ c. No item of information contained in the IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the IDS.

☐ d. Some of the items of information in the IDS were cited in a communication from a foreign patent office. Such items were first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. This statement does not relate to English language counterparts not listed in a communication from the foreign patent office. Such English language counterparts are provided to aid the Examiner's consideration of non-English items first cited in the communication from the foreign patent office. As to the remaining items of information, to the knowledge of the person signing the certification after making reasonable inquiry, such remaining items were not known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement.

V. FEES

☐ a. This Information Disclosure Statement is being filed concurrently with the filing of a new patent application or Request for Continued Examination. No fee is required.

☐ b. This Information Disclosure Statement is being filed within three months of the filing date of an application. No fee is required.

☐ c. This Information Disclosure Statement is being filed before the mailing date of a first Action on the merits. No fee is required. If a first Office Action on the merits has issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the statement under 37 C.F.R. § 1.97(e) above. If no statement has been made, charge our deposit account for the required fee.

☒ d. This Information Disclosure Statement is being filed before the mailing date of a Final Office Action or before the mailing date of a Notice of Allowance (see 37 C.F.R. § 1.97(c)(1)).

☒ No statement. The fee as required by 37 C.F.R. § 1.17(p) is provided.  
or

☐ See the above statement. No fee is required.

☐ e. This Information Disclosure Statement is being filed after the mailing date of a Final Office Action or after the mailing date of a Notice of Allowance (see 37 C.F.R. § 1.97(d)), see the statement above. The fee as required by 37 C.F.R. § 1.17(p) is provided.

VI. PAYMENT OF FEES

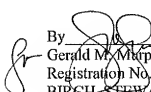
☒ The required fee is listed on the attached Fee Transmittal.

☐ No fee is required.

If the Examiner has any questions concerning this IDS, please contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the USPTO is requested to consider this IDS under the proper rule and charge the appropriate fee to Deposit Account No. 02-2448.

Dated: September 21, 2011

Respectfully submitted,

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Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		Application Number	10/571,069-Conf. #2459
		Filing Date	December 7, 2006
		First Named Inventor	Hidemil KURIHARA
		Art Unit	1649
		Examiner Name	C. M. Borgeest
Sheet	2	of	2
		Attorney Docket Number	0230-0245PUS1

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA	Fujishita, K. et al., "Grape Seed Extract Acting on Astrocytes Reveals Neuronal Protection Against Oxidative Stress via Interleukin-6-mediated Mechanism", Cell Mol Neurobiol, Vol. 29, pp.1121-1129, 2009.	
	CB	Fujita, T. et al., "P2Y1 Receptor Signaling Enhances Neuroprotection by Astrocytes Oxidative Stress via IL-6 Release in Hippocampal Cultures", GLIA, Vol. 57, pp. 244-257, 2009.	
	CC	Clinical Periodontology 8th edition (1996), Fermin A. Carranza et al., eds., W.B. Saunders Company, Philadelphia	
	CD	Scheres, N. et al., "Gingival and periodontal ligament fibroblasts differ in their inflammatory response to viable Porphyromonas gingivalis", Journal of Periodontol., Vol. 45, pp. 262-270, 2010.	
	CE	Wikesjö et al. (1999) "Periodontal Repair in Dogs: Effect Of Rhbnp-2 Concentration On Regeneration Of Alveolar Bone And Periodontal Attachment," J. Clin. Periodontol 26: 392-400.	
	CF	Kirker-Head, Advanced Drug Delivery Reviews, 43:65-92 (2000)	
	CG	Wikesjö et al., J Periodontol. May 2003; 74: 635-647	
	CH	Blomlof and Lindskog, J Periodontol. 1998; 69: pp.392-395	
	CI	Yaegashi, T. et al., "Effect of Hydroxylapatite Particles During Healing of Experimental Furcation Involvement in Beagle Dogs", Nihon Shishubyo Gakkai Kaishi, Vol. 31, No. 1, pp. 83-99, March 1989	AB S
	CJ	Takeda, K. et al., "Characteristics of High-Molecular-Weight Hyaluronic Acid as a Brain-Derived Neurotrophic Factor Scaffold in Periodontal Tissue Regeneration", Tissue Engineering: Part A, Vol. 17, pp. 955-967, 2011.	
	CK	Takeda, K. et al., "Brain-Derived Neurotrophic Factor Enhances Periodontal Tissue Regeneration", Tissue Engineering, Vol. 11, No. 9/10, pp. 1618-29, 2005.	
	CL	Kajiyama, M. et al., "Brain-derived Neurotrophic Factor Stimulates Bone/Cementum-related Protein Gene Expression in Cementoblasts", Journal of Biol. Chem., Vol. 283, No. 23, pp. 16259-67, 2008.	
	CM	Mizuno, N. et al., "Effect of Neurotrophin-4/5 on Bone/Cementum-Related Protein Expressions and DNA Synthesis in Culture of Human Periodontal Ligament Cells", Journal of Periodontol., Vol. 79, No. 11, pp. 2182-9, 2008.	
	CN	Xu, W. et al., "Promotion of Functioning of Human Periodontal Ligament Cells and Human Endothelial Cells by Nerve Growth Factor", Journal of Periodontol., Vol. 77, No. 5, pp. 800-807, 2006.	
	CO	Bakos, D. et al., "Hydroxyapatite-collagen-hyaluronic acid composite", Biomaterials, Vol. 20, pp. 191-195, 1999.	

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language translation is attached.